9

- 15. A method for expelling air in prosthetic device with a vacuum assisted suspension system, the prosthetic device having a suspension liner carries a pin at a distal end, the pin defining a longitudinally elongate bore and at least one passageway extending obliquely relative to the bore and communicating therewith at a proximal end of the pin, the prosthetic device further including a socket adapted to receive the suspension liner and comprises a locking mechanism having a receiving port and a channel located at a distal end of the receiving port, the method comprising:
  - placing the suspension liner into the socket and orienting the pin with the receiving port;
  - inserting the pin into the receiving port such that air between the socket and the suspension liner is expelled at least through the passageway into the bore and 15 through channel to an exterior of the locking mechanism;
  - wherein the pin defines an annular flange protruding from a proximal area and a shaft extending distally from the annular flange, the bore being formed concentric with 20 the shaft and the annular flange is entirely located above and proximally the at least one passageway.
- 16. The method of claim 15, further comprising the step of
  - resting the annular flange against a proximal end of the 25 locking mechanism when the pin is fully received by the receiving port.
  - 17. The method of claim 15, further comprising the step of: sealing an outer surface of the pin against a side wall defining a cavity of the receiving port.

10

- 18. The method of claim 17, wherein the locking mechanism includes a first and second seals protruding inwardly into the cavity from the side wall and is adapted to engage the outer surface of the shaft.
  - 19. The method of claim 15, further comprising the step of: expelling air from a side wall defining a cavity of the receiving port via at least one port as the pin is inserted into the cavity.
- **20**. A pin lock for a prosthetic device in a vacuum assisted suspension system, comprising:
  - a pin defining a longitudinally elongate bore and at least one passageway extending obliquely relative to the bore and communicating therewith at a proximal end of the pin, the pin defines an annular flange at a proximal end entirely above the at least one passageway and a shaft extending distally from the annular flange, the bore being concentric with the shaft and an outer surface of the shaft being substantially smooth;
  - a locking mechanism having a receiving port arranged to receive the pin and a channel located at a distal end of the receiving port and adapted to communicate with the bore to exhaust air through the pin therefrom, the receiving port defines an elongate cavity adapted to closely receive the shaft, the locking mechanism including a first seal protruding inwardly into the cavity from a side wall defining the cavity and adapted to engage an outer surface of the shaft, the first seal located distally to the at least one release port.

\* \* \* \* \*